

REMARKS

Claims 2 and 19 are canceled herein. Claims 1, 10 and 18 are amended herein. Claims 1, 3-18 and 20-26 remain pending. No new matter has been added as a result of the Claim amendments.

35 U.S.C. §103(a) Rejection

The present Office Action rejected Claims 1, 3-4, and 10-16 under 35 U.S.C. 103(a) as being unpatentable over Hong Su et al. ("Identification of Syntactically Similar DTD Elements for Schema Matching", The Second International Conference on Web-Age Information Management (Waim 2001), Xi'an, China, July 2001, pp. 1-13, hereafter referred to as "SchemaMatching.") in view of Hong Su et al. ("XEM: Managing the Evolution of XML documents", Eleventh International Workshop on Research Issues in Data Engineering (RIDE 2001), Heidelberg, Germany, April 1-2, 2001, pp. 1-8, hereafter referred to as "XEM"). Applicants have reviewed the above cited references and respectfully submit that the present invention as recited in Claims 1, 3-4, and 10-16, are not rendered obvious over SchemaMatching in view of XEM.

Independent Claims 1 and 10

Applicants respectfully point out that independent Claims 1 and 10 each recite that the present invention includes methods for document transformation.

Specifically, independent Claim 1 recites, in part:

- [A] method of document transformation comprising:
 - a) modeling a source XML document corresponding to a source schema as a source tree having a plurality of source nodes;
 - b) modeling a target XML document corresponding to a target schema as a target tree having a plurality of target nodes; and
 - c) generating a sequence of transformation operations that transforms said source tree to said target tree, said sequence of transformation operations utilizing an extensible stylesheet language for transformations (XSLT) generator to translate the sequence of transformation operations into an equivalent XSLT transformation script and utilize the transformation script to transform an input XML document

corresponding to the source schema to the target XML document corresponding to the target schema.

Additionally, independent Claim 10 recites, in part:

- [A]method of document transformation comprising:
- a) modeling a source schema of XML and a target schema of XML as a tree structure creating a source tree and a target tree, said source tree having a plurality of source nodes, said target tree having a plurality of target nodes; and
 - b) generating a sequence of transformation operations that transforms said source XML document to said target XML document, wherein said plurality of source nodes of said source schema are matched and transformed to said plurality of target nodes in said target schema, said sequence of transformation operations utilizing an extensible stylesheet language for transformations (XSLT) generator to translate the sequence of transformation operations into an equivalent XSLT transformation script and utilize the transformation script to transform an input XML document corresponding to the source schema to the target XML document corresponding to the target schema.

Applicants respectfully submit that the claimed feature “tree, said sequence of transformation operations utilizing an extensible stylesheet language for transformations (XSLT) generator to translate the sequence of transformation operations into an equivalent XSLT transformation script and utilize the transformation script to transform an input XML document corresponding to the source schema to the target XML document corresponding to the target schema.” Is not taught or rendered obvious over SchemaMatching in view of XEM.

Moreover, Applicants respectfully submit that the combination of SchemaMatching in view of XEM does not render obvious the present claimed features because SchemaMatching in view of XEM teaches away from the utilization of an extensible stylesheet language for transformations (XSLT) generator to translate the sequence of transformation operations into an equivalent XSLT transformation script and utilize the transformation script to transform an input XML document corresponding to the source schema to the target XML document corresponding to the target schema.

Specifically, Applicants understand XEM to clearly teach in the last paragraph of Section 6, "XSLT [Gro] is a language designed for transforming individual XML documents. It does not require any DTD and users can specify arbitrary XML data transformation rules. Hence no schema constraints are enforced on the data or on the transformation. Lexus (XML Update Language) [Inf00] is a declarative language proposed by an open source group, Infozone, to update stored documents. However, its primitives also only work on the document level without taking DTD into account. So both XSLT and Lexus cannot serve in the scenario where structure is required" (emphasis added).

For this reason, Applicants respectfully submit that the present invention as recited in Claims 1 and 10 is in a condition for allowance. In addition, Applicants respectfully submit that Claims 2-9 which depend from independent Claim 1 are also in a condition for allowance as being dependent on an allowable base claim. Also, Applicants respectfully submit that Claims 11-17 which depend from independent Claim 10 are also in a condition for allowance as being dependent on an allowable base claim.

Claims 2 and 17-21

In the Office Action, the Examiner rejects Claims 2 and 17-21 under 35 U.S.C. §103(a) as being unpatentable over SchemaMatching in view of XEM and further in view of Swamy et al. (6874141) hereinafter "Swamy". Applicants have reviewed the above cited references and respectfully submit that the present invention as recited in Claims 2 and 17-21, are not rendered obvious over SchemaMatching in view of XEM and further in view of Swamy.

Independent Claim 18

Applicants respectfully point out that independent Claim 18 recites that the present invention includes methods for document transformation.

Specifically, independent Claim 18 recites, in part:

[A] method of document transformation comprising:
a) modeling a source XML document corresponding to a source schema as a source tree having a plurality of source nodes;
b) modeling a target XML document corresponding to a target schema as a target tree having a plurality of target nodes; and
c) generating a sequence of transformation operations that transforms said source tree to said target tree, said sequence of transformation operations utilizing an extensible stylesheet language for transformations (XSLT) generator to translate the sequence of transformation operations into an equivalent XSLT transformation script and utilize the transformation script to transform an input XML document corresponding to the source schema to the target XML document corresponding to the target schema.

“[i]f the proposed modification would render the prior art invention being modified unsatisfactory for its intended purpose, then there is no suggestion or motivation to make the proposed amendment” (emphasis added) (MPEP 2143.01; *In re Gordon*, 733 F.2d 900, 221 USPQ 1125 (Fed. Cir. 1984)).

As stated herein, Applicants respectfully state that the combination of SchemaMatching in view of XEM does not render obvious the present claimed features because SchemaMatching in view of XEM teaches away from the utilization of an extensible stylesheet language for transformations (XSLT) generator to translate the sequence of transformation operations into an equivalent XSLT transformation script and utilize the transformation script to transform an input XML document corresponding to the source schema to the target XML document corresponding to the target schema.

Specifically, Applicants understand XEM to clearly teach in the last paragraph of Section 6, "XSLT [Gro] is a language designed for transforming individual XML documents. It does not require any DTD and users can specify arbitrary XML data transformation rules. Hence no schema constraints are enforced on the data or on the transformation. Lexus (XML Update Language) [Inf00] is a declarative language proposed by an open source group, Infozone, to update stored documents. However, its primitives also only work on the document level without taking DTD into account. So both XSLT and Lexus cannot serve in the scenario where structure is required" (emphasis added).

Thus, Applicant respectfully submits that the combination of SchemaMatching and XEM teach directly away from utilizing an extensible stylesheet language for transformations (XSLT) generator. Moreover, Applicant understands XEM to teach both XSLT and Lexus cannot serve in the scenario where structure is required (emphasis added). Therefore, the proposed modification as suggested by the present Office Action would render the prior art invention being modified unsatisfactory for its intended purpose (emphasis added).

For this reason, Applicants respectfully submit that the features of Claim 18 are not taught or rendered obvious in view of SchemaMatching and XEM references and further in view of Swamy. For this reason, Applicants respectfully submit that Claim 18 overcomes the rejection under 35 U.S.C. §103(a) and is allowable.

Further, Applicants respectfully submit that Claims 20-26 which depend from independent Claim 18 are also in a condition for allowance as being dependent on an allowable base claim.

Additionally, Applicants respectfully submit that Claim 17 which depends from independent Claim 10 is also in condition for allowance as being dependent on allowable base claims.

Claims 5-9

In the Office Action, the Examiner rejects Claims 5-9 under 35 U.S.C. §103(a) as being unpatentable over SchemaMatching in view of XEM and further in view of Peter Buneman et al. ("UnQL: A Query Language and Algebra for SemiStructured Data Based on Structural Recursion", The VDLB Journal, issue No. 9, Springer-Verlag, (c) 2000, pp. 76-110, hereinafter referred to as "Buneman". Applicants have reviewed the above cited references and respectfully submit that the present invention as recited in Claims 5-9, are not rendered obvious over SchemaMatching in view of XEM and further in view of Buneman.

For the reasons provided herein and not repeated for purposes of brevity and clarity, Applicants respectfully submit that the SchemaMatching and XEM references do not teach or render obvious the features of Independent Claims 1 and 10. Thus, Applicants respectfully submit that Claim 1 overcomes the rejection under 35 U.S.C. §103(a) and is allowable.

Further, Applicants respectfully submit that Claims 5-9 which depend from independent Claim 1 are also in a condition for allowance as being dependent on an allowable base claim.

Claims 22-26

In the Office Action, the Examiner rejects Claims 22-26 under 35 U.S.C. §103(a) as being unpatentable over SchemaMatching in view of XEM and further in view of Swamy and Buneman. Applicants have reviewed the above cited references and respectfully submit that the present invention as recited in Claims 22-26, are not

rendered obvious over SchemaMatching in view of XEM and further in view of Swamy and Buneman.

For the reasons provided herein and not repeated for purposes of brevity and clarity, Applicants respectfully submit that the SchemaMatching and XEM references further in view of Swamy do not teach or render obvious the features of Independent Claim 18. Thus, Applicants respectfully submit that Claim 18 overcomes the rejection under 35 U.S.C. §103(a) and is allowable.

Further, Applicants respectfully submit that Claims 22-26 which depend from independent Claim 18 are also in a condition for allowance as being dependent on an allowable base claim.

CONCLUSION

In light of the amendments and arguments presented herein, Applicants respectfully request reconsideration of the rejected Claims for allowance thereof.


Based on the arguments presented above, Applicants respectfully assert that Claims 1, 3-18 and 20-26 overcome the rejections of record. Therefore, Applicants respectfully solicit allowance of these Claims.

The Examiner is invited to contact Applicants' undersigned representative if the Examiner believes such action would expedite resolution of the present Application.

Respectfully submitted,

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